



Living Lab Phase II Folsom Street Preliminary Evaluation

Folsom Street Preliminary Evaluation

- Evaluation Criteria for Week 1+
 - **Volume**
 - Speed
 - **Travel Time**
 - **Safety**
 - Emergency Response
 - **Diverted Traffic**

Non-typical Traffic Patterns Last Week

- Pre-Ironman Boulder visitors
- Final installation is on-going
- August 1st student “move in”
- Horizon West lot repaving





Folsom Street Volume and Speed Data

Folsom Volume & Speed (Week 2)

	Folsom	Mo/Yr	Avg Daily Traffic weekday (vpd)	Avg Speed (mph)	85th Percentile Speed (mph)	Speed Limit
Before	North of Bluff St	April 2015	15,780	35	39	30
After	North of Bluff St	Aug 2015	13,790	33	37	30
Before	North of Canyon	June 2015	18,970	29	34	30
After	North of Canyon	Aug 2015	15,790	25	30	30



Folsom Street: Preliminary Travel Time Data and Observations

Travel Time Runs

- 65 total runs
 - AM peak times
 - PM peak times
 - Weekday off-peak times
 - Weekend times
- Six data collection days
 - Tuesday, July 28th
 - Wednesday, July 29th
 - Friday, July 31st
 - Saturday, August 1st
 - Monday, August 3rd
 - Tuesday, August 4th



***Dashboard video
documentation***

Preliminary “After” Travel Time Summary

- Travel data during and shortly after installation
 - Week 1+
- Northbound & Southbound variations
- Variations by time of day
 - PM peak has the most variation
- SB trips have more delay/travel time variation than NB
- Intersection congestion
 - Pearl, Walnut & Canyon



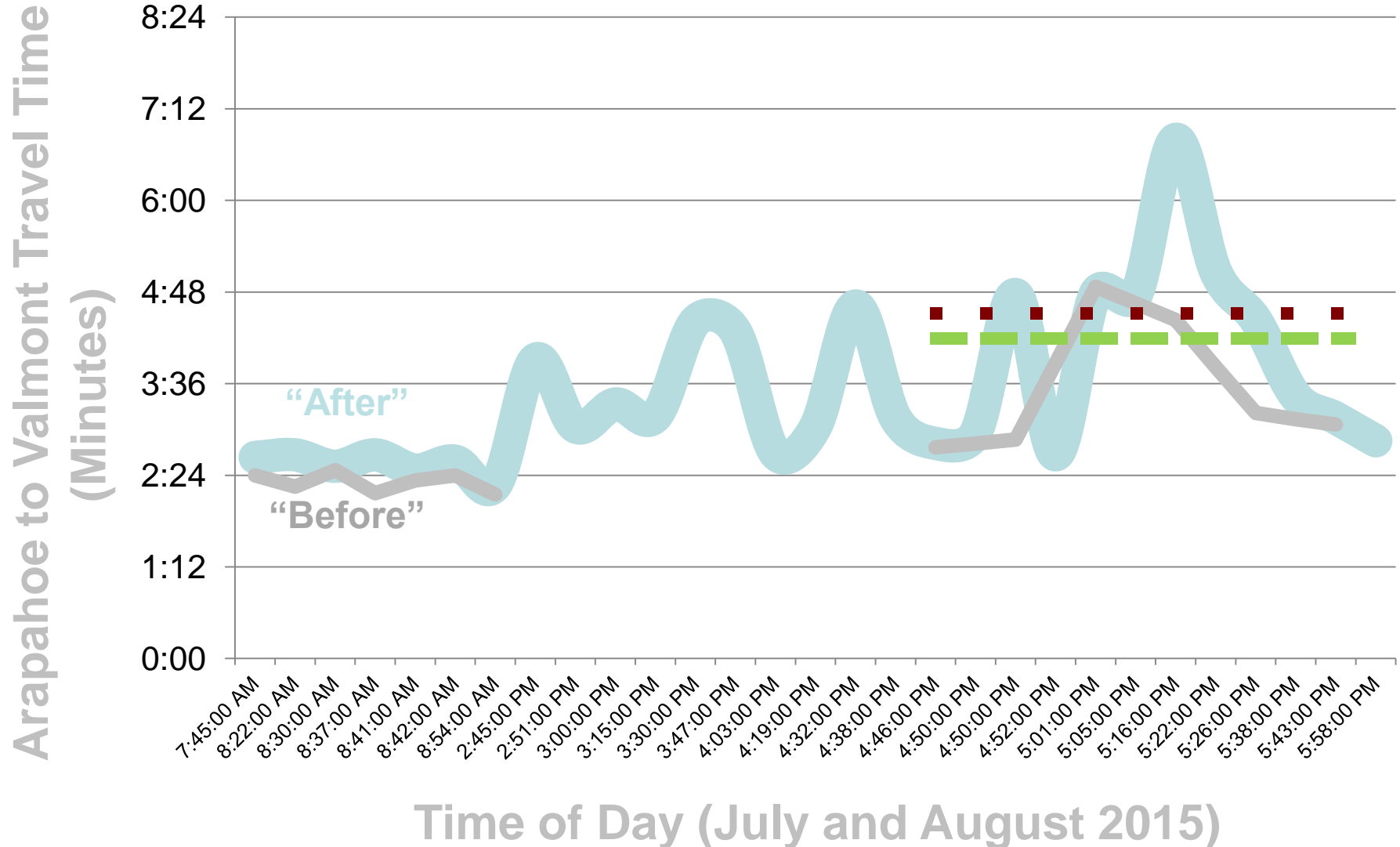
Preliminary “After” Travel Time

Northbound	AM Peak	Afternoon	PM Peak	Before PM
Low	2:16	2:41	2:40	2:46
High	2:40	4:25	6:48	4:52
Variation	0:24	1:44	4:08	
After Avg	2:32	3:29	4:15	
Before (11/14)	2:18	n/a	3:32	
Modeled	n/a	n/a	4:30	
Before to After Avg	0:14	n/a	0:43	
Model to After Avg	n/a	n/a	0:15	

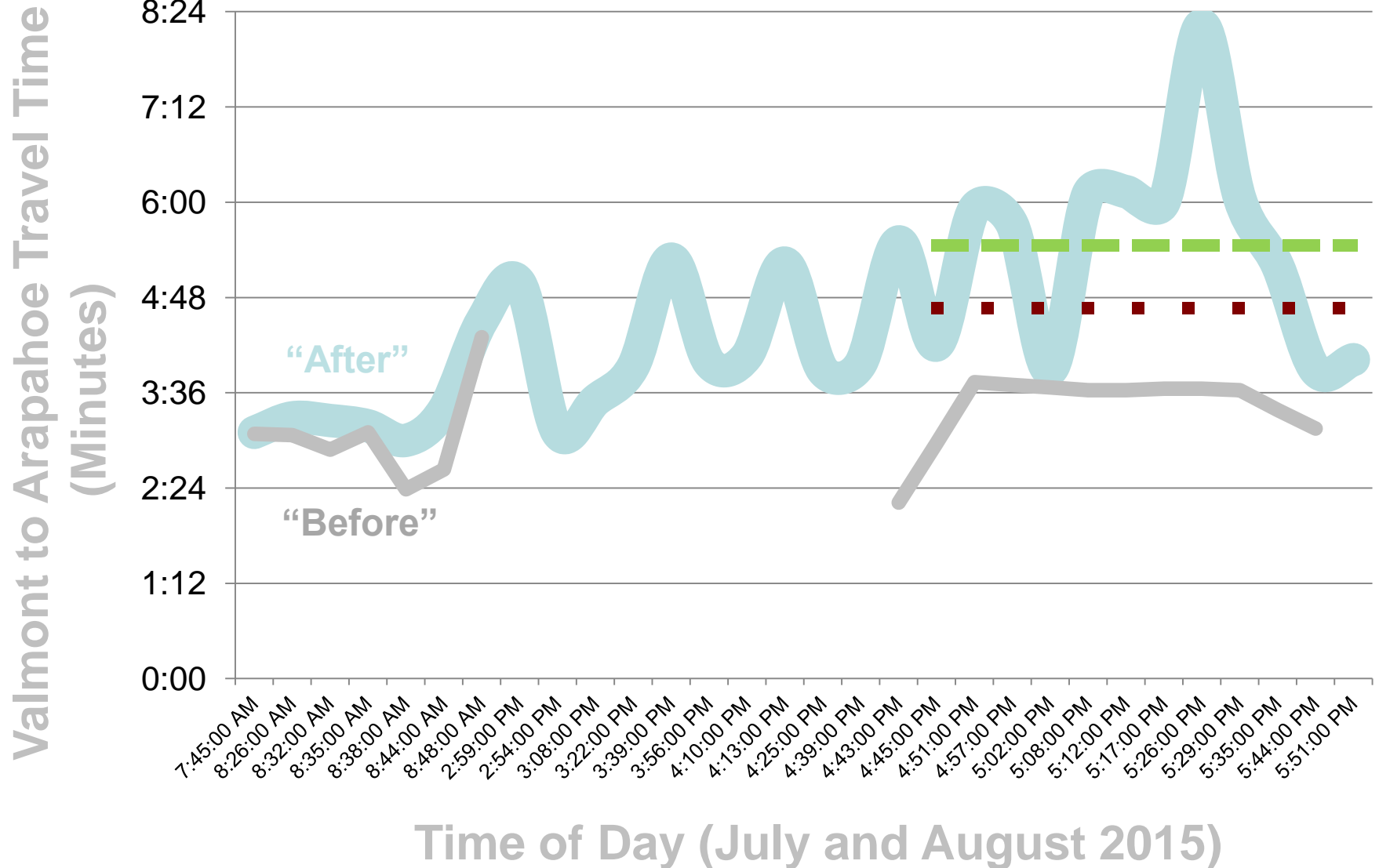
Preliminary “After” Travel Time

Southbound	AM Peak	Afternoon	PM Peak	Before PM
Low	3:00	3:06	3:53	2:13
High	4:30	5:17	8:14	3:44
Variation	1:30	2:11	4:21	
After Avg	3:23	4:13	5:36	
Before (11/14)	3:03	n/a	3:20	
Modeled	n/a	n/a	4:30	
Before to After Avg	0:20	n/a	2:16	
Model to After Avg	n/a	n/a	1:06	

Northbound “Before vs. After”



Southbound “Before vs. After”



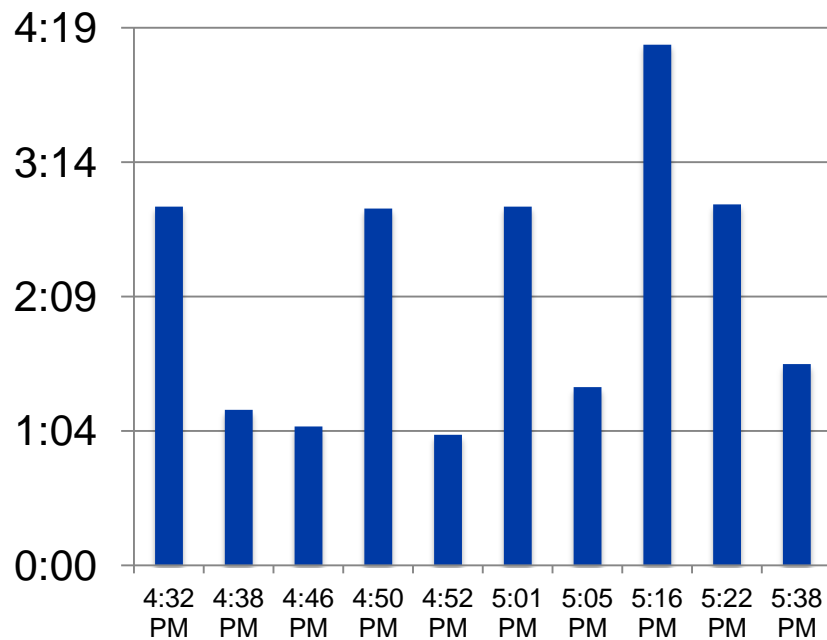
Major Change: Canyon/Pearl PM Variability

4:30 PM to 5:30 PM



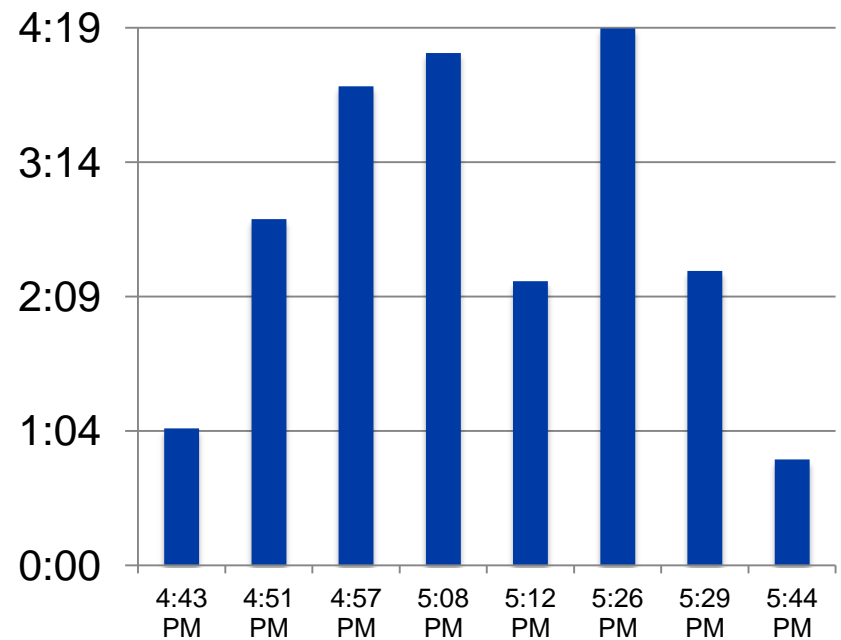
Canyon/Pearl PM Variability

Northbound “After”

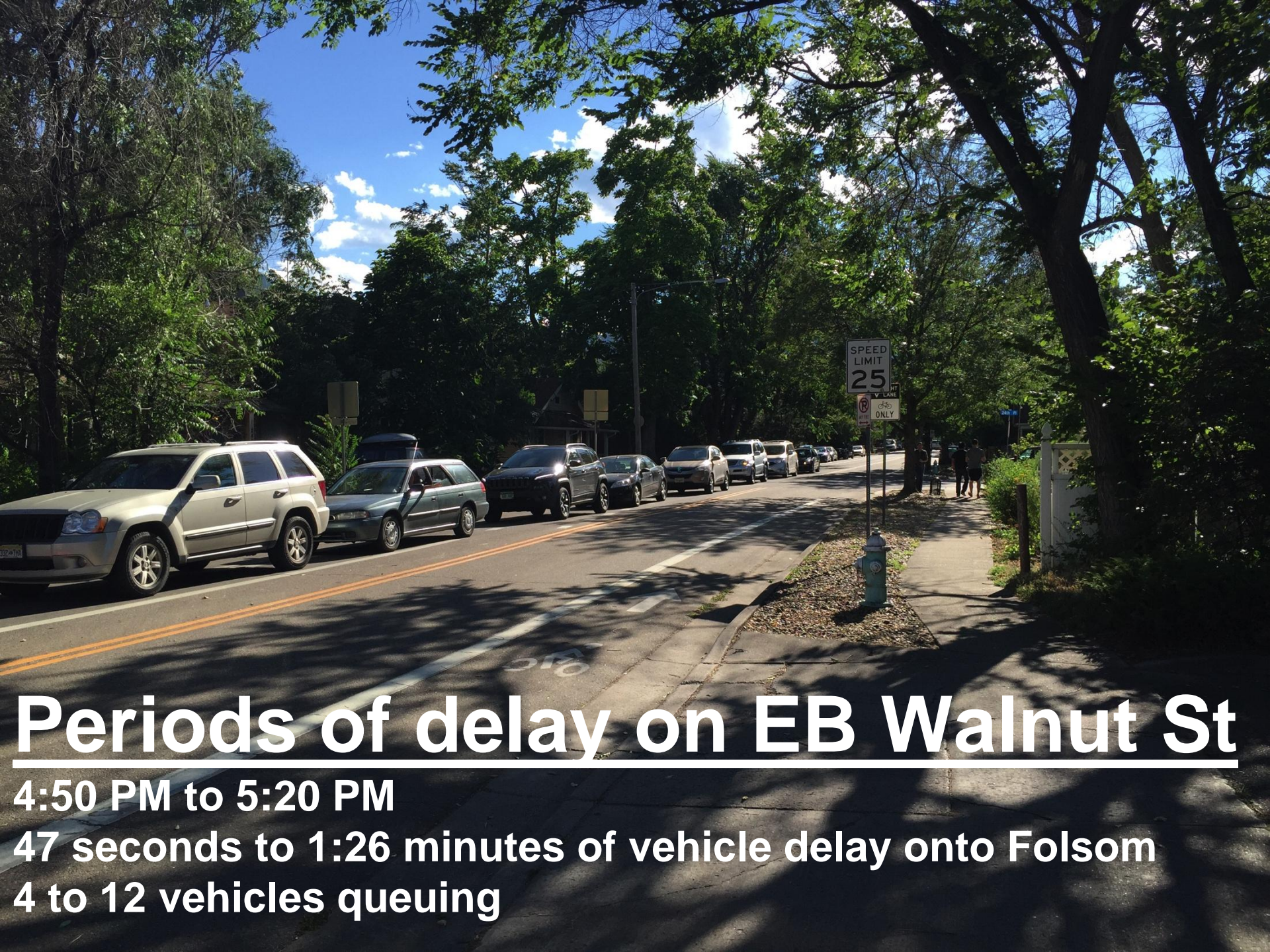


0:38 “Before” Variability
2:34 “After” Variability
+1:56 PM Peak Variability

Southbound “After”



1:21 “Before” Variability
3:28 “After” Variability
+2:07 PM Peak Variability



Periods of delay on EB Walnut St

4:50 PM to 5:20 PM

47 seconds to 1:26 minutes of vehicle delay onto Folsom

4 to 12 vehicles queuing



Ped/Bike x-ing @ Walnut St

4:50 PM to 5:30 PM

Pedestrian signal activated every 30 seconds
60 bicycles and pedestrians crossing Folsom Street

Queuing @ SB Pearl Street

4:50 PM to 5:30 PM

Queuing back to Pine during most cycles

Clears during most cycles



Summary Videos Available – click link below

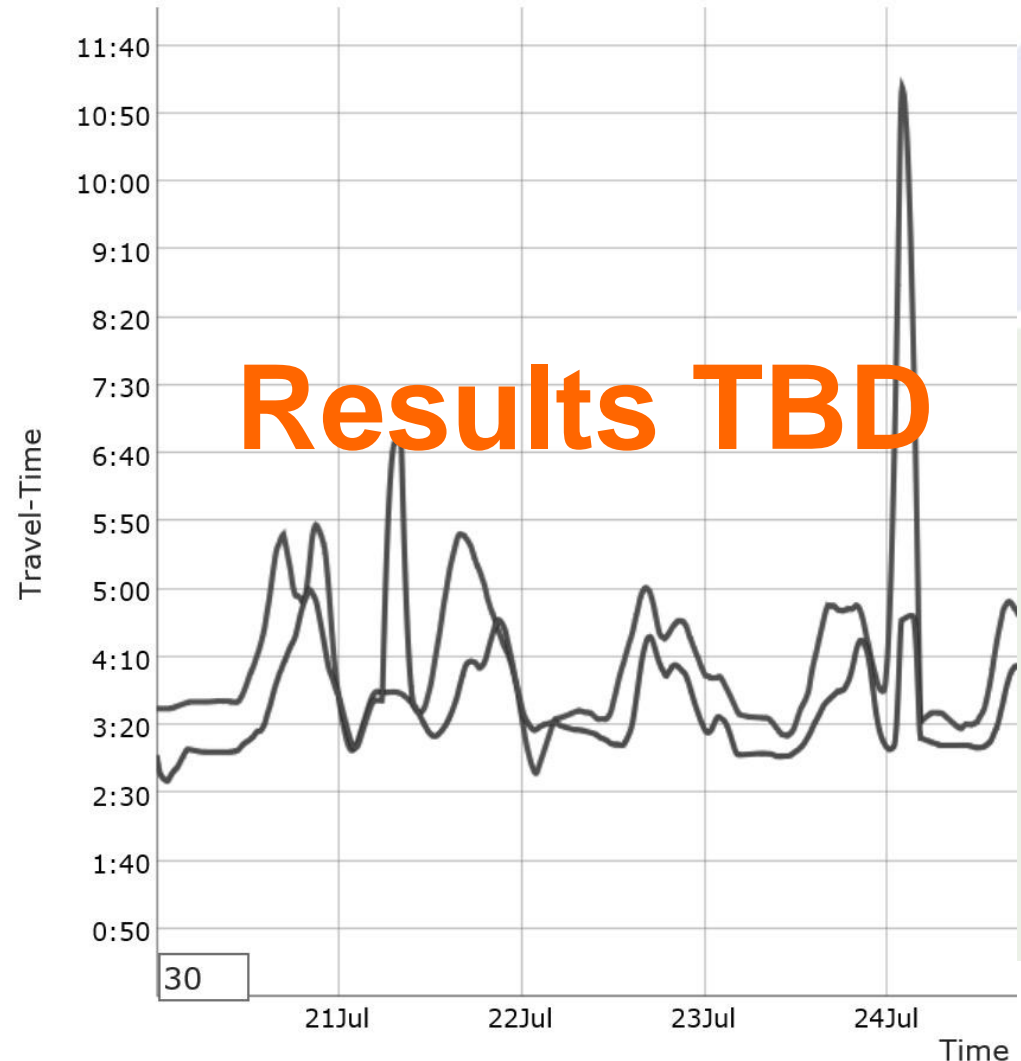


<https://youtu.be/PNTg2R85zXQ>

Future: Add'l Data Collection

Acyclica Data (Oct 2015)

- Bluetooth/Wifi based travel time data
- Collects 24 hour data
- Track data over longer time
- More to report in future/on-going updates





Folsom Street: Safety Data

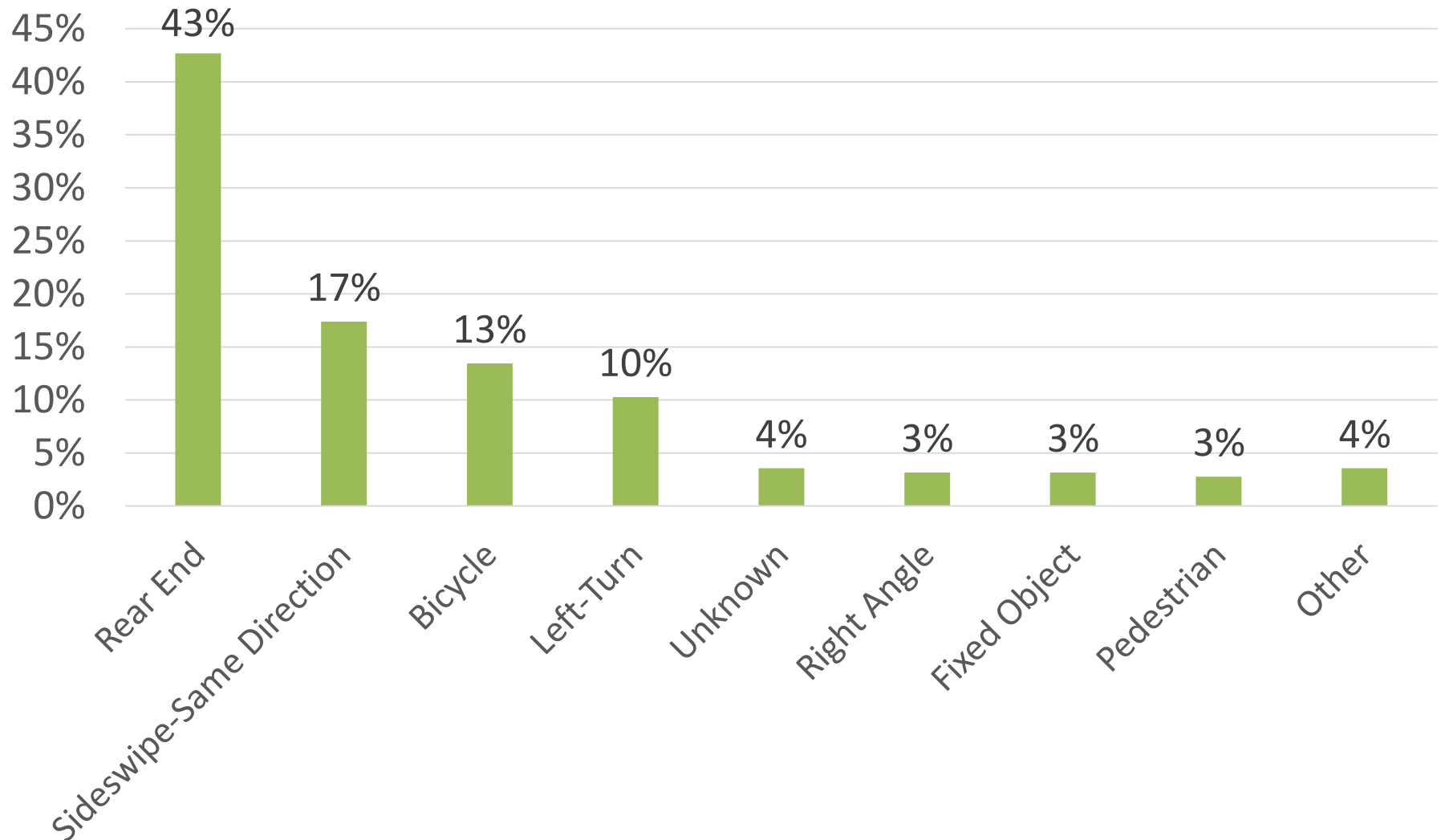
“Before” Safety Data

2012-2014

- Average crash frequency: 84.3 crashes per year
 - 11.3 crashes/year involving bicycle
 - 2.3 crashes/year involving pedestrian
- 1.3 serious injury crashes per year
- No fatalities in last 3 years

“Before” Crash Types

2012-2014



“After” Safety Data

July 25th to Aug 1st

One week range is from installation start date to Saturday August 1st

- 1 vehicle to vehicle rear-end crash at Folsom & Valmont
- No bicycle or pedestrian crashes
- No serious injuries or fatalities





Folsom Street: Emergency Responders Feedback

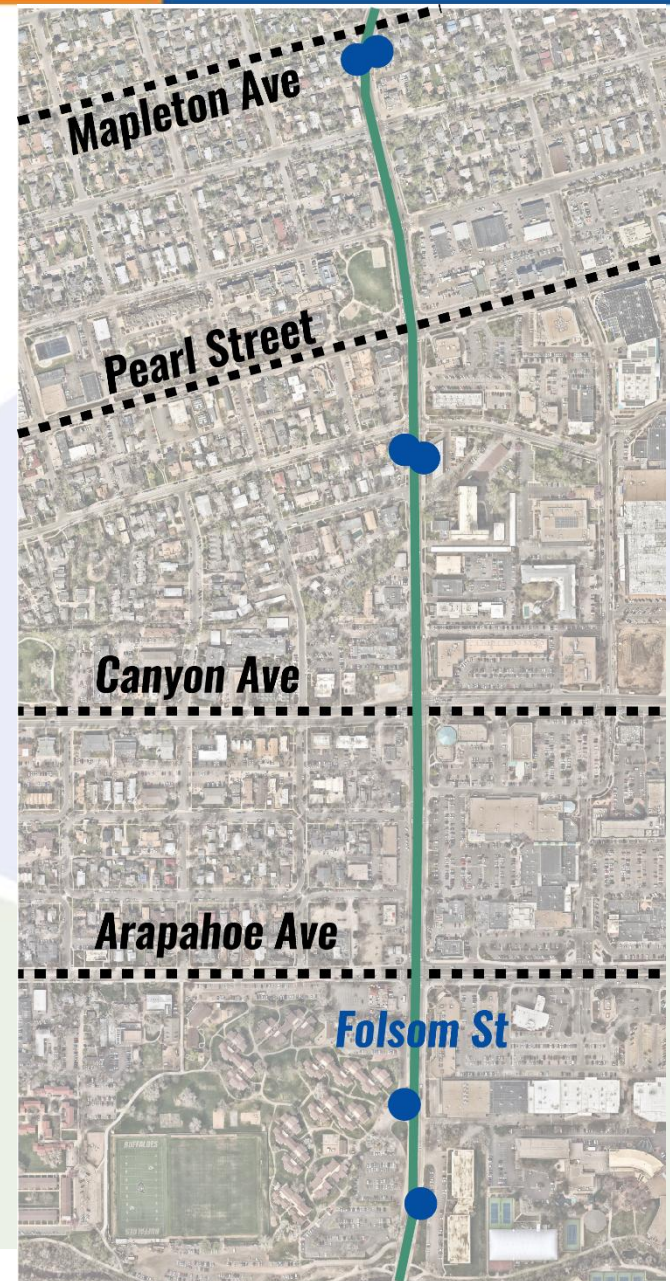
Feedback from Emergency Responders

- Fire Dept – monitoring corridor and too early for specific results
- Police Dept – monitoring corridor, concerns:
 - Corridor/intersection congestion
 - Vehicles turning at driveways and intersections
 - Snow/ice maintenance will be important
 - Few bikes seen riding corridor, some instances of bikes riding on the sidewalk
 - Need to monitor response times and not expect vehicles to drive over bollards



Folsom Street: Preliminary Bicycle Volume & Demographic Data

Continuous Count Site Locations

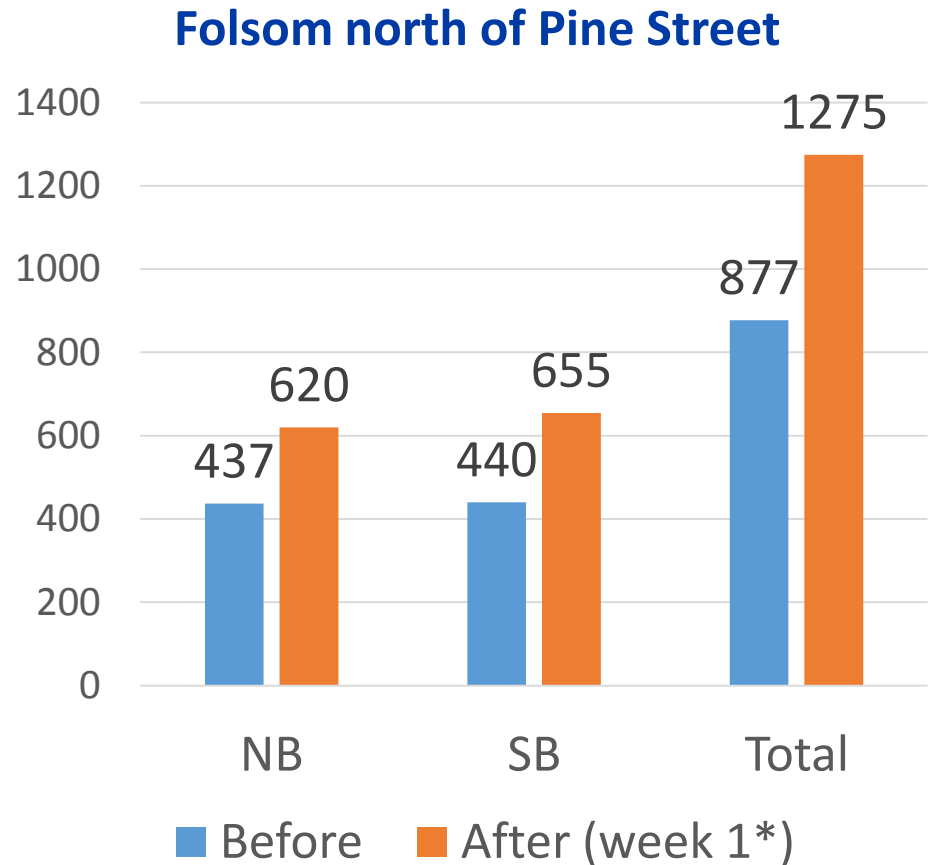


Public webpage to view data: <http://www.eco-public.com/ParcPublic/?id=699>

Daily Bicycle Volumes

“Before” vs. Week 1 “After”

- “Before” data: collected Tuesday, June 30th
- Week 1 “after” data: average daily volume from Tuesday, July 28 – Thursday, July 30th



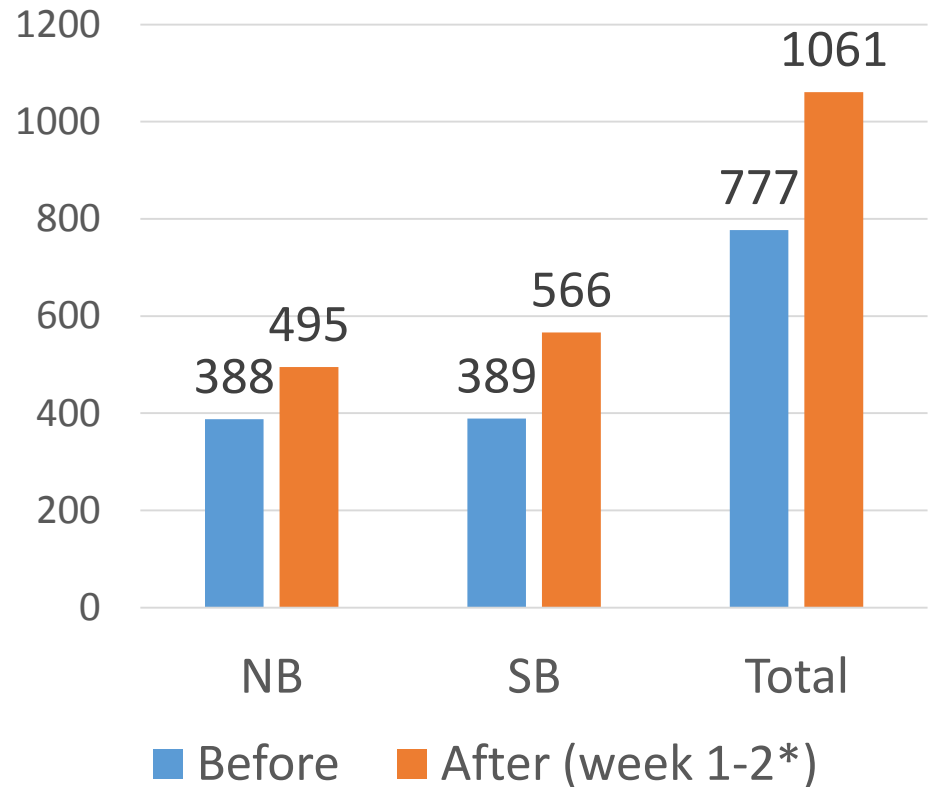
**Validation of counters currently in progress. Volumes may later be adjusted to account for potential variances.*

Daily Bicycle Volumes

“Before” vs. Week 1-2 “After”

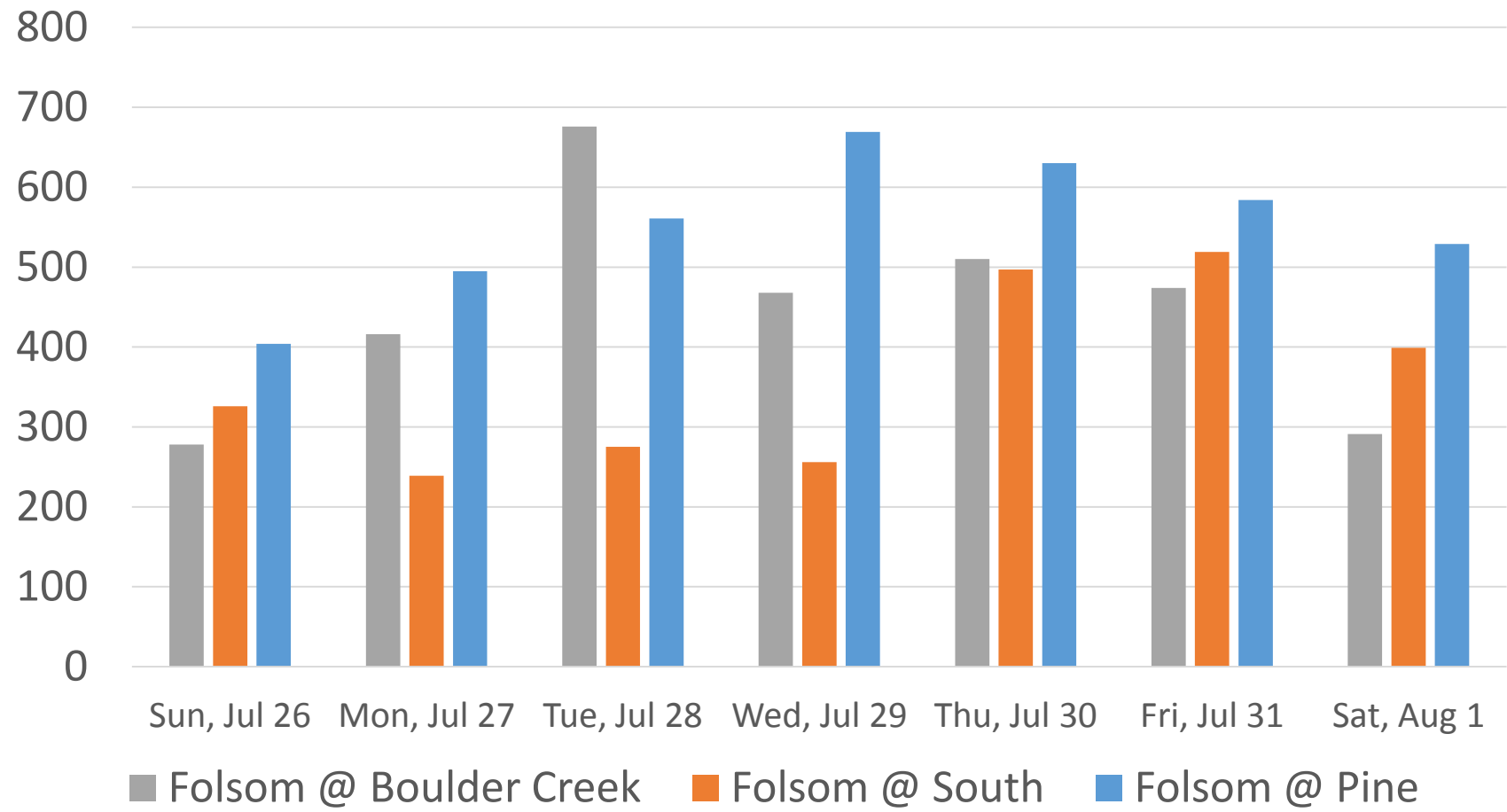
- “Before” data: collected Tuesday, June 30th
- Week 1-2 “after” data: average daily volume from Thursday, July 30th, Tuesday, Aug 4, & Wednesday, Aug 5

Folsom south of South Street



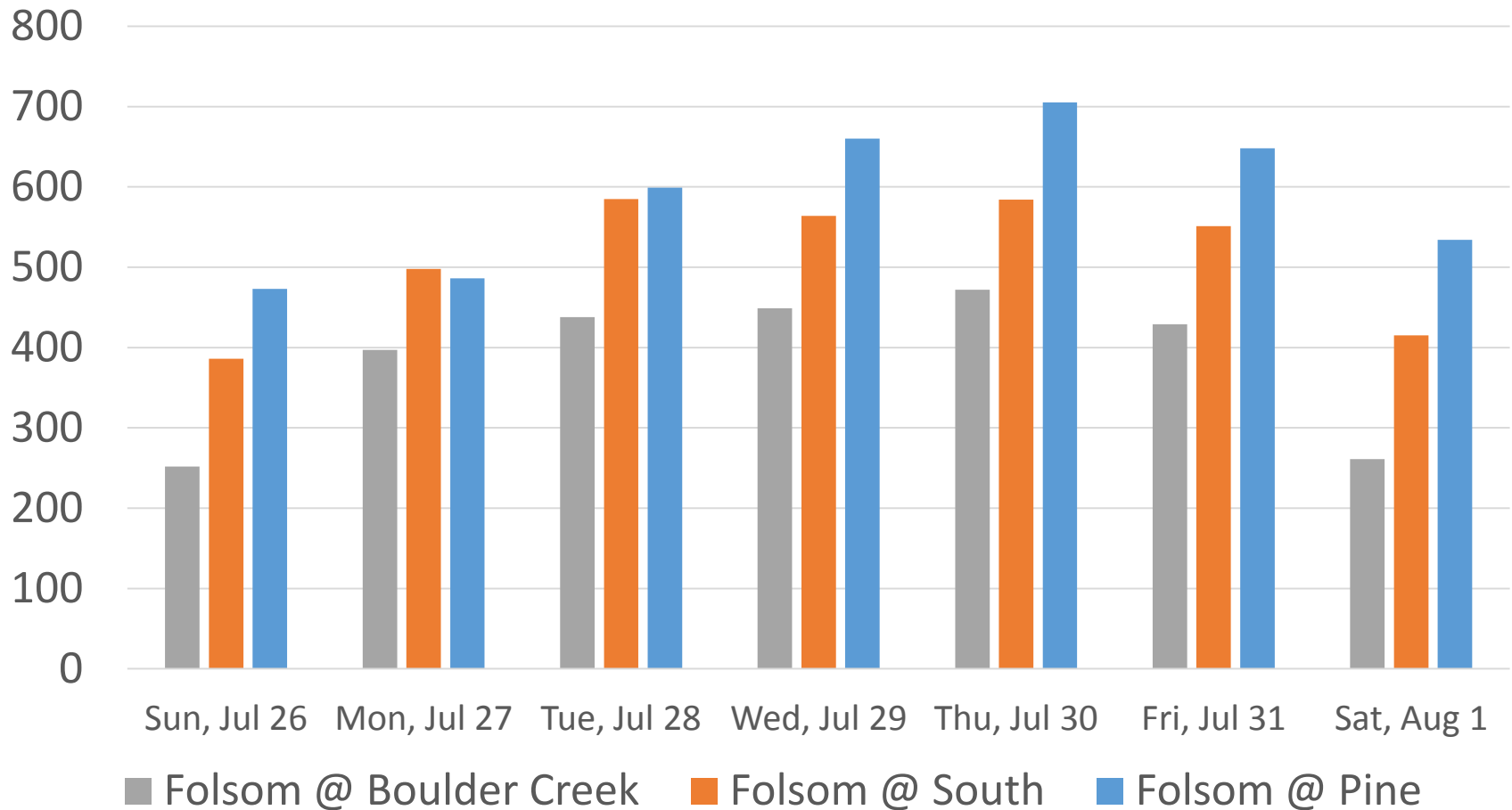
**Validation of counters currently in progress. Volumes may later be adjusted to account for potential variances.*

Northbound Bicycle Volumes*



**Validation of counters currently in progress. Volumes may later be adjusted to account for potential variances.*

Southbound Bicycle Volumes*



**Validation of counters currently in progress. Volumes may later be adjusted to account for potential variances.*

March 2015 “Before” vs. 4 days after installation*

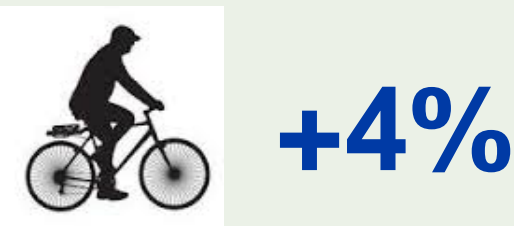
Women



Families



Men



* *CU and BVSD not in fall session yet*



This data will be updated frequently during the duration of the Folsom corridor project.
For more info on the Living Lab Phase II projects:
www.boulderlivinglab.net